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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,198	12/26/2000	Jocelyn Chow	91436-270	1325
22463	7590	10/28/2004	EXAMINER KADING, JOSHUA A	
SMART AND BIGGAR 438 UNIVERSITY AVENUE SUITE 1500 BOX 111 TORONTO, ON M5G2K8 CANADA			ART UNIT 2661	PAPER NUMBER

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/746,198

Applicant(s)

CHOW ET AL.

Examiner

Joshua Kading

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing  
5 correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

10 The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by applicant's admitted prior art (AAPA).

15

Regarding claim 1, AAPA discloses "a method of allocating a plurality of data frames amongst a plurality of basestations, said plurality of data frames spanning an interval of time, said method comprising:

for each of said plurality of basestations allocating a sub-set of said plurality of  
20 data frames, each data frame comprising a plurality of time slots (figure 2, elements 204 are time slots), said sub-set being contiguous in time within said interval of time (figure

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2, where the data frames of figure 2 are allocated according to the description on page 4, lines 13-17)."

Regarding claim 2, AAPA discloses "the method of claim 1 wherein each of said  
5 plurality of basestations operates using the same carrier frequency (page 4, line 17 and page 5, line 9 where although page 4 discloses more than one frequency, page 5 discloses that each of the base stations in a group uses the same frequency)."

Regarding claim 3, AAPA discloses "the method of claim 2 wherein said each  
10 data frame comprises eight timeslots in a Time Division Multiple Access (TDMA) wireless network (page 3, line 20 describes the system as being that of TDMA, figure 2, elements 204 where there are eight total time slots)."

Regarding claim 4, AAPA discloses "the method of claim 1 wherein said plurality  
15 of basestations form part of a TDMA wireless network employing at least one of the Enhanced Data rates for Global Evolution (EDGE) and EDGE Compact standards (page 2, lines 6-9)."

Regarding claim 5, AAPA discloses "the method of claim 1 further comprising:  
20 wherein said each of said plurality of basestations operates using a plurality of frequencies, allocating to each of said plurality of basestations a sub-set of said plurality of data frames for each of said plurality of frequencies used by a basestation, said

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sub-set of said plurality of data frames being contiguous in time within said interval of time (page 4, lines 13-17)."

Regarding claim 6, AAPA discloses "a method of allocating a bitmap of resources  
5 in a wireless network amongst a plurality of co-channel basestations, said bitmap formed by a group of data frames, said method comprising:

dividing said bitmap of resources into sub-bitmaps, each of said sub-bitmaps formed by a number of contiguous data frames of said group of data frames, each of said sub-bitmaps not overlapping in time with any other of said sub-bitmaps (figure 2  
10 where the frame groupings are described on page 4, lines 13-17 and as seen in figure 2, each sub-bitmap is made up of contiguous data frames); and

allocating at least one of said sub-bitmaps to each of said plurality of co-channel basestations (page 4, lines 13-17)."

15 Regarding claim 11, AAPA discloses "a method of allocating wireless network resources amongst a plurality of basestations, said wireless network resources comprising a group of data frames, said method comprising:

receiving requests for wireless network resources from said plurality of basestations (page 4, lines 25-26);

20 responsive to said requests, assigning to each of said plurality of basestations a portion of said wireless resources, said portion comprising a group of said data frames, said group of said frames being contiguous in time (page 4, lines 23-26)."



Regarding claim 8, AAPA discloses "...receive instructions indicating a time period during which said basestation may communicate with mobilestations to be serviced by said basestation, said time period defined by a contiguous set of data frames (page 14, lines 13-17 where because the timeslots identify the time period when

5 a base station may communicate with a mobile station, both mobile station and base station must know the period of time allowed for each slot, therefore the "instructions" identifying the time period must be received at some point); and

transmit to each of said mobilestations to be serviced by said basestation data identifying a portion of time during which a mobilestation may communicate with said  
10 basestation; and communicate with said mobilestations during said time period (page 14, lines 13-17 where the timeslots identify when the mobile station may communicate)."

AAPA lacks "a computer readable medium having instructions" to carryout the above steps of claim 8.

15 Although AAPA does not explicitly disclose the computer instructions, it would have been obvious to one with ordinary skill in the art at the time of invention to have the steps of claim 8 executed by a set of computer instructions. The motivation being that the only feasible way to process and manage data of such short time periods as in a TDMA system efficiently, is to do it by computer instructions.

20

Regarding claim 9, AAPA discloses the steps of claim 8. Although AAPA explicitly lacks the computer readable medium to store the computer instructions to

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carryout said steps, AAPA further discloses "indicating a time period during which said basestation may communicate are defined by a group of timeslots, said group of timeslots defining a sub-bitmap (page 14, lines 13-17 where the timeslots identify when the base station may communicate)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the time period during which a base station may communicate with the steps of claim 8 for the same reasons and motivation as in claim 8.

Regarding claim 10, AAPA discloses the steps of claim 9. Although AAPA explicitly lacks the computer readable medium to store the computer instructions to carryout said steps, AAPA further discloses "receive instructions defining a plurality of sub-bitmaps (page 4, lines 13-17 where the sub-bitmaps are defined by the grouping of frames in figure 2); and allocate each of said plurality of sub-bitmaps to a sector serviced by said basestation (page 4, lines 13-17)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the receiving instructions defining a plurality of sub-bitmaps and the allocating each sub-bitmaps to a base station with the steps of claim 9 for the same reasons and motivation as in claim 9.

Regarding claim 14, AAPA discloses "...dividing said bitmap of resources into sub-bitmaps, each of said sub-bitmaps formed by a number of contiguous data frames of said group of data frames, each of said sub-bitmaps not overlapping in time with any other of said sub-bitmaps (figure 2 where the frame groupings are described on page 4,



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lines 13-17 and as seen in figure 2, each sub-bitmap is made up of contiguous data frames); and

allocating at least one of said sub-bitmaps to each of said plurality of co-channel basestations (page 4, lines 13-17)."

5        AAPA lacks "a computer readable medium having instructions" to carryout the above steps of claim 14.

Although AAPA does not explicitly disclose the computer instructions, it would have been obvious to one with ordinary skill in the art at the time of invention to have the steps of claim 14 executed by a set of computer instructions. The motivation being  
10        that the only feasible way to process and manage data of such short time periods as in a TDMA system efficiently, is to do it by computer instructions.

Claims 7, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Jokinen et al. (U.S. Patent 5,729,534).

15

Regarding claims 7 and 15, AAPA discloses the method of claims 6 and 14. AAPA lacks "form the size of each of said sub-bitmaps responsive to at least one of: service loads for each of said plurality of co-channel basestations during at least one previously allocated bitmap; and service demands for each of said plurality of  
20        co-channel basestations during at least one previously allocated bitmap."

However, Jokinen discloses "form the size of each of said sub-bitmaps responsive to at least one of: service loads for each of said plurality of co-channel

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basestations during at least one previously allocated bitmap; and service demands for each of said plurality of co-channel basestations during at least one previously allocated bitmap (col. 3, lines 45-48 where the service load is inadequate, so more slots are assigned)."

5           It would have been obvious to one with ordinary skill in the art at the time of invention to include the forming the size of each sub-bitmaps based on service load conditions with the methods of claims 6 and 14 for the purpose of allowing a minimum level of service for the communication channel. The motivation being that a minimum level of service guarantees a communication link always (Jokinen, col. 4, lines 45-59).

10

          Regarding claim 13, AAPA discloses the method of claim 12. AAPA lacks "...determining the service load for at least some of said plurality of basestations; and wherein the size of said contiguous portions assigned to said each of said plurality of basestations is proportional to said service loads determined."

15           However, Jokinen discloses "...determining the service load for at least some of said plurality of basestations; and wherein the size of said contiguous portions assigned to said each of said plurality of basestations is proportional to said service loads determined (col. 3, lines 45-48 where the service load is inadequate, so more slots are assigned)."

20           It would have been obvious to one with ordinary skill in the art at the time of invention to include the determining the service load and forming a size of the contiguous portions based on the service load with the method of claim 12 for the

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purpose of allowing a minimum level of service for the communication channel. The motivation being that a minimum level of service guarantees a communication link always (Jokinen, col. 4, lines 45-59).

5           Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Mazur et al. (U.S. Patent 6,600,758 B1).

          Regarding claim 16, AAPA discloses "a method of allocating data frames amongst a plurality of basestations, comprising: allocating a first plurality of data frames amongst said plurality of basestations, such that each of said plurality of basestations is  
10   allocated a time contiguous sub-set of said first plurality of data frames (figure 2, where the data frames of figure 2 are allocated according to the description on page 4, lines 13-17); allocating a second plurality of data frames amongst said plurality of basestations, said second plurality of data frames being subsequent in time to... said first plurality of data frames, such that each of said plurality of basestations is allocated  
15   a time contiguous sub-set of said second plurality of data frames (figure 2, where the data frames of figure 2 are allocated according to the description on page 4, lines 13-17, further each time group represents a different sub-set of frames allocated to different basestations); wherein each said data frame comprises a plurality of time slots (figure 2, elements 204 are time slots)."

20           However, AAPA lacks what Mazur discloses, that the second plurality of allocated data frames are "of different number than" the first plurality of allocated data

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frames (figure 4, elements the data frames allocated to block "B" are of different numbers than those allocated to block "C").

It would have been obvious to one with ordinary skill in the art at the time of invention to include the different number of data frames per allocated set of frames for the purpose of using a different number of C frames than B frames, for instance, if there is a greater need for C frames at that moment. The motivation for allowing a different number of data frames within a given group versus another group is to allow for a more flexible channel allocation process to allow for the ever changing needs of a wireless communication system (Mazur, col. 8, lines 1-14).

10

### ***Response to Arguments***

Applicant is unclear how applicant's admitted prior art (AAPA) can be used as prior art. As stated in the MPEP § 2129.I, *"A statement by an applicant during prosecution identifying the work of another as 'prior art' is an admission that that work is available as prior art against the claims, regardless of whether the admitted prior art would otherwise qualify as prior art under the statutory categories of 35 U.S.C. 102. Riverwood Int'l Corp. v. R.A. Jones & Co., 324 F.3d 1346, 1354, 66 USPQ2d 1331, 1337 (Fed Cir. 2003)."*

15

Applicant's admitted prior art falls under this category because as identified in the Specification under "Background to the Invention" (which is assumed to be prior art, if it isn't why is it in the background?), page 2, lines 6-9 and page 3, lines 22-23 strongly suggest that the subsequent technology discussed is indeed prior art because it was not

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invented by applicant nor was it applicant's prior work. Further, as identified in the Specification, page 10, lines 27-page 11, lines 1-2 and page 13, lines 19-22 show that the technology that the invention is built upon was published a year prior to the filing date of applicant's application. Thus AAPA is proper to use as prior art under 35 U.S.C.

5 102(b).

Applicant's arguments filed 24 June 2004 have been fully considered but they are not persuasive.

10 Applicant argues that for claims 1-6, 8-12, and 14 AAPA does not read on applicant's claimed invention because AAPA does not disclose that the data frames disclosed in AAPA are not "whole" data frames as per applicant's invention. The examiner respectfully disagrees.

15 There is no mention in any of the claims that the data frames discussed must be "whole" data frames. If this is part of applicant's invention, then it should be placed in the claims. Further, applicant is directed to claim 1, lines 5-6 which states, "allocating a sub-set of said plurality of data frames". This is taken to mean that a portion (sub-set) of the plurality of data frames is allocated, not the entire frame. Therefore, as currently read, the claims are fully covered by AAPA.

20

Applicant further argues that claims 6, 12, and 14 overcome the prior art because they disclose "contiguous portion" or "number of contiguous data frames". The examiner respectfully disagrees.

As stated in applicant's Specification, page 2, lines 18-19 in connection with

5 figure 1, "contiguous" is suggested to mean adjacent, next to each other. This definition is consistent with Merriam-Webster's Collegiate, Tenth Edition dictionary definition of contiguous:

10 *contiguous - being in actual contact; touching along a boundary; adjacent; next or near in time or sequence; touching or connected throughout in an unbroken sequence.*

As seen in figure 2, the data frames, portions of data frames, and time portions are all contiguous with one another. Therefore, AAPA still reads on applicant's invention as claimed.

15 It should be noted that if applicant does not intend "contiguous" to have the definition as described above, applicant must clearly define the term in the specification. See MPEP § 2106.II(C).

Applicant argues that claims 7, 13, and 15 are not rejectable under 35 U.S.C.  
20 103 as being unpatentable over AAPA in view of Jokinen et al. for reasons similar to those of claims 1-6, 8-12, and 14 the claims overcome both references alone and in combination. The examiner respectfully disagrees.

As explained above with regard to claims 1-6, 8-12, and 14, AAPA fully reads on applicant's invention as claimed. Jokinen was further used in combination to cover

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deficiencies of claims 7, 13, and 15 not covered by AAPA. Therefore, the rejections for claims 7, 13, and 15 are maintained in light of the above explanation for AAPA.

Applicant argues that figure 2 should not be labeled as "prior art" because it is not prior art. The examiner respectfully disagrees. As explained above, that which is believed to prior art has been identified by the applicant in the Specification. This includes figure 2 (and figure 1). Further, it is common practice that prior art information be included in the Background portion of the Specification. It does not always have to be, but the fact that applicant has included descriptions of figures 1 and 2 in the Background section in combination with the admitted sources of this information, leads to the conclusion that the information in figures 1 and 2 is prior art. Thus the figures must be labeled as prior art.

Applicant's arguments for the objection of claim 8 are persuasive. Therefore, the objection to claim 8 has been withdrawn.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

- 5 For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Joshua Kading  
Examiner  
Art Unit 2661

10 October 22, 2004

  
BOB PHUNKULH  
PRIMARY EXAMINER